

IN THE CLAIMS:

Please cancel claims 2, 9-20, 23-34 and 36-40 without prejudice or disclaimer, amend claims 1, 4-8, 21-22, and add new claims 41-44 as follows:

1. (Currently Amended) A method for ~~manufacturing~~ dry cleaning a semiconductor device, comprising:

(1) a step of forming a first film on a major surface of a substrate; ~~(2) a step of patterning said first film in a predetermined pattern;~~

~~(3)~~ a step of placing said substrate having said patterned first film in a process chamber; and

~~(4)~~ a step of placing, ~~on~~ above said major surface of said substrate, a pad structure having ~~an opposing~~ a major surface opposing to said major surface of said substrate and having a gas ejection section provided on said ~~opposing~~ major surface of the pad structure, and ejecting a predetermined cleaning gas from said a gas ejection section in a depressurized state in said process chamber [while];

(4) a step of controlling keeping a predetermined distance between said major surface of said substrate and said [opposing] major surface of the pad structure thereby gearing a gas pressure therebetween to a desired gas pressure; and

(5) a step of moving said major surface of the pad structure relatively in parallel with said major surface of said substrate.

2. (Cancelled)

2

~~2.~~ (Previously Presented) The method according to claim 1, wherein said substrate is a semiconductor wafer.

3

~~3.~~ (Currently Amended) The method according to claim 1, wherein a plurality of gas ejection sections provided on said ~~opposing~~ major surface of said pad structure are placed apart from one another at an identical distance, and said predetermined cleaning gas is ejected toward said major surface of said substrate from said plurality of gas ejection sections [substrate] in said steps (3), (4) and (5).

4

~~4.~~ (Currently Amended) The method according to claim 3, wherein said plurality of gas ejection sections include a single gas ejection section located in a center of said major

surface of said pad structure and ~~a plurality of other~~ gas ejection sections arranged at a peripheral portion of said major surface of said pad structure.

~~5.~~
6.

(Currently Amended) The method according to claim 1, wherein said ~~predetermined~~ cleaning gas consists of one of Ar, nitrogen, He and Ne.

~~6.~~
7.

(Currently Amended) The method according to claim ~~2~~, wherein a diameter of said major surface of said pad structure is smaller than a diameter of said major surface of said substrate semiconductor wafer.

~~7.~~
8.

(Currently Amended) A method for manufacturing a semiconductor device, comprising:

(1) a step of forming an insulating film on a major surface of a semiconductor substrate;

(2) a step of forming [a] at least one through hole in said insulating film by dry etching;

(3) a step of placing said semiconductor substrate having said hole-formed insulating film in a process chamber; and

(4) a step of keeping inside said process chamber in a depressurized state, placing, above said major surface of said substrate, a pad structure having a major surface opposing to said major surface of said substrate, and having a gas ejection section provided on a said major surface of said pad structure thereof in such a way that said major surface of said pad structure faces said insulating film formed on said major surface of said semiconductor substrate, and ejecting a ~~predetermined~~ cleaning gas from said gas ejection section, ~~thereby cleaning a surface of said insulating film having said hole~~

(5) a step of controlling a distance between said major surface of said substrate and said major surface of the pad structure by detecting a force acting therebetween to a desired gas pressure; and

(6) a step of cleaning said hole-formed insulating film on said major surface of said semiconductor substrate by moving said major surface of the pad structure relatively in parallel with said major surface of said substrate.

9-20. (Cancelled)

~~6~~
21.

(Currently Amended) A method for manufacturing a semiconductor device, comprising:

a step of forming a film having a [predetermined] pattern on a major surface of a semiconductor substrate;

a step of ~~inserting~~ placing said semiconductor substrate in a process chamber;

a step of maintaining inside of said process chamber in a depressurized state, and supplying an etching gas into said process chamber to thereby form a plasma environment; and

a step of placing, above said major surface of said substrate, a pad structure having a major surface opposing to said major surface of said substrate and having a gas ejection section provided on an ~~opposing~~ said major surface of said pad structure in such a way as to face said film having said ~~predetermined~~ pattern of said semiconductor substrate, and ejecting a ~~predetermined~~ cleaning gas from said gas ejection section[while];

a step of controlling keeping a predetermined distance between said major surface of said substrate and said [opposing] major surface of the pad structure thereby gearng a gas pressure therebetween to a desired gas pressure; and

a step of moving said major surface of the pad structure relatively in parallel with said major surface of said substrate, in said process chamber where said plasma environment is formed.

~~9~~ ~~22~~

(Currently Amended) The method according to claim ~~21~~ ⁸, wherein said cleaning gas consists of one of Ar, nitrogen, He and Ne ~~is used as said predetermined gas.~~

23-34. (Cancelled)

~~10~~
~~35~~

(Original) A method for manufacturing a semiconductor device, comprising:

(1) a step of loading a semiconductor wafer into a process chamber;

(2) a step of performing a plasma process on a major surface of said semiconductor wafer and performing a cleaning process on said major surface with a gas stream; and

(3) a step of unloading said semiconductor wafer from said process chamber.

36-40. (Cancelled)

~~11~~
~~41.~~ (New) The method according to claim 1, wherein said step (5) involves generating plasma of an etching gas in said process chamber.

~~12~~
~~42.~~ (New) The method according to claim 1, wherein said substrate is rotated and said pad structure is moved in parallel with said major surface of said substrate in said step (5).

~~13~~
~~43.~~ (New) The method according to claim ~~8~~⁷, wherein said step involves generating plasma of an etching gas in said process chamber.

~~14~~
~~44.~~ (New) The method according to claim ~~35~~¹⁰, wherein one of CF₄, C₂F₆, C₃F₈, Cl₂, F₂, HF, ammonia, and hydrogen is used in the plasma process for plasma generation, and one of Ar, nitrogen, He and Ne is used in the cleaning process as cleaning gas.